

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-40. (canceled)

41. (currently amended) A selective leukocyte removal filter material comprising:

a biocompatible nonionic polymer and a supporting body, wherein a biocompatible nonionic polymer is polymerized from units comprising 8-45 mol% of a polymerizable monomer having a polyalkylene oxide chain, 30-90 mol% of a polymerizable monomer having a hydrophobic group, and 2-50 mol% of a polymerizable monomer having a hydroxyl group, and wherein the biocompatible nonionic polymer is present on at least the surface of ~~a filter~~ the supporting body.

42. (previously presented) A selective leukocyte removal filter material according to claim 41, wherein the polymer has a weight average molecular weight of 100,000 to 3,000,000.

43. (previously presented) A selective leukocyte removal filter material according to claim 41, wherein the molar content ratio of the unit originating from the polymerizable monomer having a hydroxyl group to the unit originating from the

polymerizable monomer having a hydrophobic group is from 0.05 to 1.

44. (canceled)

45. (previously presented) A selective leukocyte removal filter material according to claim 41, wherein the polymerizable monomer having a hydroxyl group has solubility in water at 20°C in the range from 3 wt% to less than 50 wt%.

46. (previously presented) A selective leukocyte removal filter material according to claim 45, wherein the polymerizable monomer having a hydroxyl group is 2-hydroxyisobutyl (meth)acrylate.

47. (previously presented) The selective leukocyte removal filter material according to claim 41, wherein the polymer has a solubility parameter ( $\delta$  value) of 10.0 to 11.5 and the filter supporting body has a solubility parameter ( $\delta$  value) of 7.0 to 15.0.

48. (previously presented) The filter material according to claim 41, wherein the amount of the polymer held on the filter supporting body is 0.001 wt% to less than 10 wt%.

49. (previously presented) The filter material according to claim 41, wherein the polymer coating rate of the filter supporting body is from 40% to 90%.

50. (previously presented) The filter material according to claim 41, wherein the filter material is a woven fabric or nonwoven fabric.

51. (previously presented) The filter material according to claim 50, wherein the average fiber diameter of the woven or nonwoven fabric is from 0.5  $\mu\text{m}$  to 50  $\mu\text{m}$  and the filling density is from 0.05  $\text{g}/\text{cm}^3$  to 0.5  $\text{g}/\text{cm}^3$ .

52. (previously presented) The selective leukocyte removal filter material according to claim 41, used for selectively removing leukocytes from blood extracted from a patient of cellular immune abnormality.

53. (previously presented) The selective leukocyte removal filter material according to claim 52, wherein the disease is chronic or malignant rheumatoid arthritis, systemic erythematodes, Behcet's disease, idiopathic thrombocytopenic purpura, autoimmune hepatitis, ulcerative colitis, Crohn's disease, atopic dermatitis, rapidly progressive glomerulonephritis, or systemic inflammatory response syndrome.

54. (previously presented) A selective leukocyte removal filter apparatus comprising the filter material according to claim 41, packed in a container having at least a blood inlet port and a blood outlet port.

55. (previously presented) The selective leukocyte removal filter apparatus according to claim 54, wherein a hollow cylindrical filter formed from the filter material wound in the shape of a cylinder is packed in the container with both ends sealed, and either the blood inlet port or the blood outlet port

is provided communicating with either the inner perimeter or the outer perimeter of the cylindrical filter material.

56. (previously presented) The selective leukocyte removal filter apparatus according to claim 55, wherein the hollow cylindrical filter has a configuration of a scroll of a laminated body made of a) the filter material in the form of a sheet and b) a spacer layer material in the form of a sheet allowing blood to pass through, the starting and/or terminal ends of the spacer layer rolled in the form of a scroll being open to the outer perimeter and/or the inner perimeter of the hollow cylindrical filter to provide a passage for blood.

57. (previously presented) The selective leukocyte removal filter apparatus according to claim 55, wherein the hollow cylindrical filter has a first blood contact layer with an area from 50 cm<sup>2</sup> to 1,000 cm<sup>2</sup>.

58. (previously presented) The selective leukocyte removal filter apparatus according to claim 57, wherein the volume standard specific surface area of the first blood contact layer is 0.08 m<sup>2</sup>/ml to less than 1.0 m<sup>2</sup>/ml.

59. (previously presented) A selective leukocyte removal filter apparatus comprising:

a hollow cylindrical filter formed from a selective leukocyte removal filter material wound in the shape of a cylinder,

the hollow cylindrical filter being packed in a container having two sealed ends, at least a blood inlet port and a blood outlet port,

either the blood inlet port or the blood outlet port being in fluid communication with either the inner perimeter or the outer perimeter of the cylindrical filter material, and the hollow cylindrical filter having

(i) a first blood contact layer with an area from 50 cm<sup>2</sup> to 1,000 cm<sup>2</sup> having a volume standard specific surface area of 0.08 m<sup>2</sup>/ml to less than 1.0 m<sup>2</sup>/ml and

(ii) a second blood contact layer with a volume standard specific surface area of 1.0 m<sup>2</sup>/ml to less than 20 m<sup>2</sup>/ml,

the selective leukocyte removal filter material comprising a supporting body, and a biocompatible nonionic polymer present on at least one surface of the supporting body,

wherein the biocompatible nonionic polymer is polymerized from units comprises:

8-45 mol% of a polymerizable monomer having a polyalkylene oxide chain,

30-90 mol% of a polymerizable monomer having a hydrophobic group and

2-50 mol% of a polymerizable monomer having a hydroxyl group.

60. (previously presented) The selective leukocyte removal filter apparatus according to claim 59, wherein the thickness ratio of the second blood contact layer to the first blood contact layer is from 0.2 to 10.0.

61. (previously presented) The selective leukocyte removal filter apparatus according to claim 55, wherein the thickness of the hollow cylindrical filter is from 0.6 mm to 12.0 mm.

62. (previously presented) The selective leukocyte removal filter apparatus according to claim 54, wherein the filter material is maintained under the condition of the saturated moisture content or more using water or an aqueous solution of a water-soluble substance with a minimal risk of damage to living bodies and is sterilized.

63. (previously presented) The selective leukocyte removal filter apparatus according to claim 62, wherein the concentration of the water-soluble substance in the aqueous solution is 5 wt% or less.

64. (previously presented) The selective leukocyte removal filter apparatus according to claim 62, wherein the water-soluble substance is sodium chloride.

65. (previously presented) The selective leukocyte removal filter apparatus according to claim 54, used for selectively removing leukocytes from blood extracted from a patient of cellular immune abnormality.

66. (previously presented) The selective leukocyte removal filter apparatus according to claim 65, wherein the disease is chronic or malignant rheumatoid arthritis, systemic erythematodes, Behcet's disease, idiopathic thrombo cytopenic purpura, autoimmune hepatitis, ulcerative colitis, Crohn's disease, atopic dermatitis, rapidly progressive glomerulonephritis, or systemic inflammatory response syndrome.

67. (previously presented) A selective leukocyte removal system comprising a blood delivery means, an anticoagulant fluid injection means, and a selective leukocyte removal means, wherein the selective leukocyte removal means comprises the selective leukocyte removal filter apparatus according to claim 54.

68. (previously presented) The selective leukocyte removal system according to claim 67, wherein the blood delivery means delivers blood in a quantity from 1 l to 10 l at a flow rate of 10 ml/min to 200 ml/min.

69. (previously presented) The selective leukocyte removal system according to claim 67, wherein the anticoagulant fluid injection means injects an anticoagulant fluid at a rate of 1% to 20% of the blood flow rate.

70. (previously presented) The selective leukocyte removal system according to claim 67, wherein the anticoagulant fluid injected from the anticoagulant fluid injection means comprises heparin or a low molecular weight heparin.

71. (previously presented) The selective leukocyte removal system according to claim 67, wherein the anticoagulant fluid injected from the anticoagulant fluid injection means comprises a protease inhibitor.

72. (previously presented) The selective leukocyte removal system according to claim 67, wherein the anticoagulant fluid injected from the anticoagulant fluid injection means comprises an ACD-A solution or an ACD-B solution.

73. (previously presented) The selective leukocyte removal system according to claim 70, wherein the amount of anticoagulant fluid injected is from 100 units to 2,000 units per 1 l of blood.

74. (previously presented) The selective leukocyte removal system according to claim 71, wherein the amount of anticoagulant fluid injected is from 2 mg to 40 mg per 1 l of blood.

75. (previously presented) The selective leukocyte removal system according to claim 72, wherein the amount of anticoagulant fluid injected is from 20 ml to 160 ml per 1 l of blood.

76. (previously presented) The selective leukocyte removal system according to claim 67, used for selectively removing leukocytes from blood extracted from a patient of cellular immune abnormality.



77. (previously presented) The selective leukocyte removal system according to claim 76, wherein the disease is chronic or malignant rheumatoid arthritis, systemic erythematodes, Behcet's disease, idiopathic thrombo cytopenic purpura, autoimmune hepatitis, ulcerative colitis, Crohn's disease, atopic dermatitis, rapidly progressive glomerulonephritis, or systemic inflammatory response syndrome.

78. (withdrawn) A method of treating cellular immune abnormality comprising causing the blood of the patient to come in contact with the selective leukocyte removal filter material according to claim 41.

79. (withdrawn) The method according to claim 78, wherein the disease is ulcerative colitis.